

1 WHAT IS CLAIMED IS

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1. A liquid crystal display device,
comprising:

first and second, mutually opposing
substrates;

10 a liquid crystal layer confined between said
first and second substrates;

an electrode formed on said first substrate
so as to create an electric field acting generally
parallel to a plane of said liquid crystal layer; and

15 a plurality of pixels being defined in said
liquid crystal layer,

each of said plurality of pixels including
therein a plurality of domains having respective
orientations for liquid crystal molecules, such that
20 said orientation is different between a domain and
another domain within said plane of said liquid
crystal layer.

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2. A liquid crystal display device as
claimed in claim 1, wherein each of said plurality of
pixels is formed in correspondence to said electrode,

30 said electrode comprising a first electrode and a
second electrode formed on said first substrate with a
mutual separation, said plurality of domains including
a first domain adjacent to said first electrode, a
second domain adjacent to said second electrode, and a
35 third domain intervening between said first domain and
said second domain, said liquid crystal molecules
aligning, in said first and second domains, in a first

1 direction forming a first angle with respect to a
direction of said electric field within said plane of
said liquid crystal layer, said liquid crystal
molecules aligning, in said third domain, in a second
5 direction forming a second angle with respect to said
direction of said electric field within said plane of
said liquid crystal layer, wherein said second angle
is larger than said first angle.

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3. A liquid crystal display device as
claimed in claim 2, wherein said second angle is
15 larger than about 50° and smaller than about 75°.

20 4. A liquid crystal display device as
claimed in claim 2, wherein said first and second
electrodes extend parallel with each other, said first
and second directions being in a symmetric
relationship between a pair of mutually neighboring
25 pixels with respect to an elongating direction of said
first and second electrodes.

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5. A liquid crystal display device as
claimed in claim 1, wherein said liquid crystal layer
has an initial resistivity of about $1 \times 10^{13} \Omega \text{cm}$ or
more.

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1 6. A liquid crystal display device as
claimed in claim 5, wherein said liquid crystal layer
has a resistivity substantially smaller than said
initial resistivity.

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10 7. A liquid crystal display device,
comprising:
first and second, mutually opposing
substrates;
a liquid crystal layer confined between said
first and second substrates;
15 (an electrode) provided on said first
substrate so as to create an electric field acting
generally parallel to a plane of said liquid crystal
layer; and
a spacer member disposed between said first
20 and second substrates,
said liquid crystal layer being formed of a
liquid crystal having an initial resistivity of about
 $1 \times 10^{14} \Omega \text{cm}$,
said spacer releasing an impurity to said
25 liquid crystal layer.

30 8. A liquid crystal display device as
claimed in claim 7, wherein said spacer carries an
epoxy resin on a surface thereof.

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9. A liquid crystal display device as

1 claimed in claim 7, wherein said liquid crystal layer
has an initial resistivity of about $1 \times 10^{13} \Omega \text{cm}$ or
more.

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10. A liquid crystal display device as
claimed in claim 9, wherein said liquid crystal layer
10 has a resistivity substantially smaller than said
initial resistivity.

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11. A liquid crystal display device,
comprising:

first and second, mutually opposing
substrates;

20 a liquid crystal layer confined between said
first and second substrates;

an electrode formed on said first substrate
so as to create an electric field acting generally
parallel to a plane of said liquid crystal layer; and

25 a plurality of pixels being defined in said
liquid crystal layer,

each of said plurality of pixels including a
plurality of domains having respective, mutually
different electro-optic properties.

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12. A liquid crystal display device as
35 claimed in claim 11, wherein, in each of said pixels,
said electrode comprises an interdigital electrode
carrying a plurality of electrode fingers, said

1 plurality of electrode fingers being formed with an
interval which changes between an electrode finger
pair and a different electrode finger pair.

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13. A liquid crystal display device as
claimed in claim 11, wherein said electrode comprises
10 an interdigital electrode carrying a plurality of
electrode fingers, an interval of said electrode
fingers being changed in each of said pixels.

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14. A liquid crystal display device as
claimed in claim 11, wherein said electrode comprises
an interdigital electrode carrying a plurality of
20 electrode fingers, said plurality of electrode fingers
having respective, mutually different widths.

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15. A liquid crystal display device as
claimed in claim 11, wherein said liquid crystal layer
has, in each of said plurality of pixels, a thickness
that changes in a direction perpendicular to a
30 direction of said electric field acting generally
parallel to said plane of said liquid crystal layer.

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16. A liquid crystal display device as
claimed in claim 11, wherein said liquid crystal layer

1 comprises liquid crystal molecules such that said
liquid crystal molecules change an alignment direction
thereof in a direction generally perpendicular to a
direction of said electric field acting generally
5 parallel to said plane of said liquid crystal layer.

10 17. A liquid crystal display device as
claimed in claim 11, wherein said liquid crystal layer
comprises liquid crystal molecules such that said
liquid crystal molecules change a tilt angle thereof
in a direction generally perpendicular to a direction
15 of said electric field acting generally parallel to
said plane of said liquid crystal layer.

20 18. A method of fabricating a liquid
crystal display device, said liquid crystal display
device comprising: first and second, mutually opposing
substrates, a liquid crystal layer confined between
said first and second substrates, and an electrode
25 provided on said first substrate so as to create an
electric field acting generally in a plane of said
liquid crystal layer, said method comprising the step
of:
30 exposing a molecular alignment film formed
on each of said first and second substrates to a
polarized ultraviolet radiation.

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19. A method as claimed in claim 18,

1 wherein said step of exposing said molecular alignment
film is conducted in a state that a plane of
polarization of said polarized ultraviolet radiation
coincides with a desired alignment direction of liquid
5 crystal molecules constituting said liquid crystal
layer.

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20. A method as claimed in claim 18,
wherein said step of exposing said molecular alignment
film is conducted such that an exposure dose for a
non-pixel region is increased as compared with an
15 exposure dose for a pixel region.

20 21. A method of fabricating a liquid
crystal display device, said liquid crystal display
device comprising: first and second, mutually opposing
substrates, a liquid crystal layer confined between
said first and second substrates, and an electrode
25 provided on said first substrate so as to create an
electric field acting generally in a plane of said
liquid crystal layer, said method comprising the step
of:

introducing an impurity into said liquid
30 crystal layer.

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